



**MINISTRY OF TRANSPORT,
CONSTRUCTION AND REGIONAL DEVELOPMENT
OF THE SLOVAK REPUBLIC**

Air Accident and Incident Investigation Board
Nám. slobody 6, P.O. BOX.100, 810 05 Bratislava 15

Reg. No: SKA2010015

FINAL REPORT

on investigation of an air accident

of aircraft type **B1-PW-5**

registration No. **SP-3662**

Date: 16.07.2010

Place: municipality of Kšinná

A. INTRODUCTION

The investigation of air accident [AA], serious incident [SI], has been conducted pursuant to Art. 18 of the Act No 143/1998 on Civil Aviation (Civil Aviation Act) and on Amendment of Certain Acts.

The final report is issued in accordance with the Regulation L 13 that is the application of the provisions of ANNEX 13 Air accident and Incident Investigation to the Convention on International Civil Aviation and with the Council Directive 94/56/EC, establishing the fundamental principles governing the investigation of civil aviation accidents and incidents.

The exclusive aim of investigation is to establish causes of an accident or serious incident and prevent their occurrence, but not to refer to any fault or liability of persons.

This final report, its individual parts or other documents related to the investigation of the air accident have informative character and can only be used as recommendation for the implementation of measures to prevent occurrence of other air accidents and serious incidents with similar causes.

Operator / Owner:	Aeroklub Warszawski Ul. Ksiezykowa 1 01-934 Warszawa, Poland
Type of aircraft:	B1-PW-5
Registration No:	SP - 3662
Take-off site:	LZPE
Planned landing place:	LZPE
Flight phase:	competitive flight – ground landing
Place of accident:	municipality of Kšinná N 48°48'27'' E 018°21'31''
Date and time of accident:	16.07.2010, 12:18 hrs

Note: All time data in this report are stated in the UTC time.

B. INFORMATIVE SUMMARY

On 16 July 2010, at 12:18 hrs during competitive flight on the 31st FAI World Gliding Championship in Prievidza ("31st FAI WGC 2010"), the pilot made a safety ground landing near the municipality of Kšinná. The rear part of the aircraft body behind the midsection was damaged in the hard landing.

The pilot was not injured.

The following persons were appointed as investigators of the air accident:

Ing. BENEK Igor

Ing. CHUDÝ Ján

The report is issued by:

Air Accident and Incident Investigation Board
of the Ministry of Transport, Construction and Regional Development
of the Slovak Republic

C. MAIN PART OF REPORT

1. FACTUAL INFORMATION
2. ANALYSES
3. CONCLUSIONS
4. SAFETY RECOMMENDATIONS

1. FACTUAL INFORMATION

1.1 History of the flight

In the period of 04.07.2010 – 17.07.2010 the 31st FAI WGC 2010 took place in the Prievidza Airport ("LZPE").

On 16 July 2010, when performing a competitive task, the pilot of aircraft **B1-PW-5**, registration No. SP-3662 (competitive sign "**WI**"), headed to Bánovce n/Bebravou after having overflown the hill Rokoš. A rain shower caused a slightly increased descent of the aircraft.

Above the municipality of Kšinná the pilot reached a flight altitude that was not sufficient for continuation of the flight on the planned competitive track, so he decided to make a safety ground landing near the municipality of Kšinná.

The pilot terminated the fourth turn in an altitude of 489 m (160 m AGL).

He started the final approach with a course of 115° (wind 135 $\frac{1}{4}$ kt) and was approaching the ground with a speed $V_{APP} = 96$ km/h and with vertical rate of descent $V_v=5.5$ m/s.

The pilot landed with brake flaps out on the ground with longitudinal uphill gradient. The levelling-off and subsequent landing were probably made at a low speed with first contact by tail skid and then by the wheel of main landing gear. The distance of landing run on the raising ground from the point of contact was approximately 70 m.

The pilot reported the air accident to the Police Department of Bánovce n/Bebravou that documented the accident and performed an indicative breath test of the pilot for alcohol with negative result. The pilot informed by phone the organiser of the 31st FAI WGC 2010 about the landing of aircraft.

Daytime: Day

Flight rules: VFR

1.2 Injuries to persons

Injury	Crew	Passengers	Other persons
Fatal	-	-	-
Serious	-	-	-
Minor	-	-	-
None	1	-	

1.3 Damage to aircraft

The aircraft B1-PW-5 "WI" got off the air accident with medium-size damage, broken tube of the body approximately 1 m behind the midsection on $\frac{3}{4}$ of the perimeter, bonded seam of underbody coming apart in a length of 80 cm and scratched varnish on the left wing from the leading edge to the trailing edge under the angle of 45°.

1.4 Other damages

The Air Accident and Incident Investigation Board was not informed about circumstances with potential claims for compensation of other damages toward a third party.

1.5 Personnel information

Pilot of aircraft SP - 3662:

Citizen of the Slovak Republic, aged of 37.

Holder of the aviation personnel licence (GPL) No. SK 01000500, issued by the Civil Aviation Authority of SR, with marked validity until 11 November 2013.

Qualifications: Gliders GLD, with marked validity until 31 December 2010.

The pilot acquired qualification for the type **B1-PW-5** on 1 May 2010.

Medical certificate of 2nd class with marked validity until 28 November 2010.

Flying experience:

Total number of flying hours: 1 286 h 16 min and 901 flights

With the type B1-PW-5: 46 h 05 min and 19 flights

On the day of accident: 1 h 47 min and 1 flight

1.5 Aircraft information

Type: B1-PW-5
Registration No: SP - 3662
Serial No: 05.001.03
Year of manufacture: 2001
Manufacturer: "PZL-Bielsko 1" Sp. Z o.o, Poland.

Total number of flying hours from year of manufacture: 706 h 40 min and 459 flights.

Liability insurance valid from 15.06.2010 to 14.10.2010.

Approval of aircraft station No. Pa/1197/02 with marked validity until 8 March 2012.

The aircraft was put into operation on 29 April 2008 by issue of the certificate of airworthiness No. 3662 and certificate of registration in the Republic of Poland No 3662, issued by the Civil Aviation Authority of the Republic of Poland. The certificate of airworthiness inspection No DLC/10/229 with marked validity until 14 June 2011.

Calculation of aircraft weight at the time of air accident:

Empty weight of aircraft	195.3 kg
<u>Weight of crew</u>	<u>81.5 kg</u>
Total aircraft weight at the time of accident:	276.8 kg

The weight of aircraft at the time of air accident was within the permitted range.

1.7 Meteorological information

On that particular day our territory was influenced by the trough spreading over Central Europe. At the critical time weather in the accident area was characterised by rain showers, occurrence of 1-3/8 cumulus (Cu), cumulus congestus (Cu con) with the base of 2 100 m QNH, with average climb of 2.0 – 3.0 m/s and visibility distance of more than 10 km. The surface wind at the time of the air accident was blowing from direction of 135° and its

speed was up to 4 KT. The surface air temperature at the critical site was approximately + 31 °C.

1.8 Aids to navigation

The aircraft was equipped for VFR flights.

1.9 Communications

The aircraft was equipped by radiostation enabling a two-way communication with all air stations at any moment of flight.

1.10 Aerodrome information

Not applicable.

1.11 Flight recorders and other recording systems

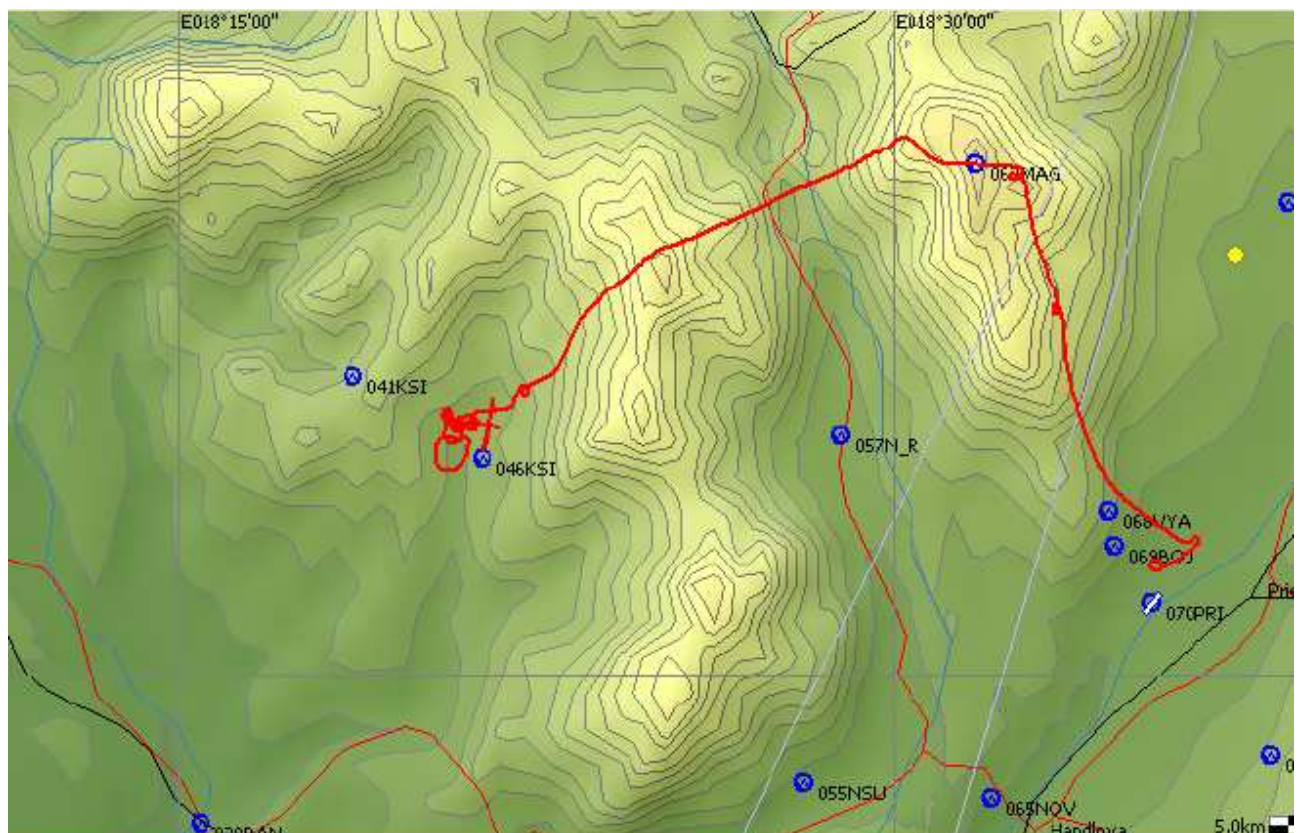
The aircraft **B1-PW-5 "WI"** was equipped by VOLKSLOGGER (IGC approved GNSS flight recorder) and COLIBRI (IGC approved GNSS flight recorder).

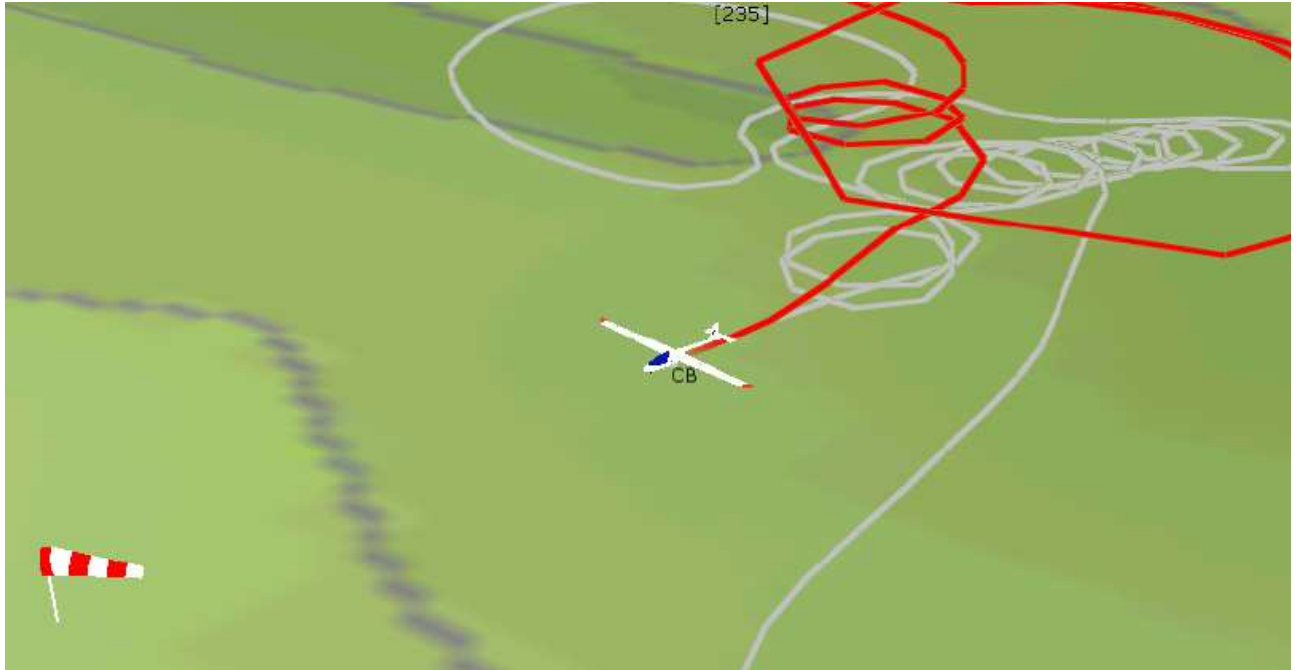
The pilot was equipped by GNSS FR (flight recorder - Global Navigation Satellite System). Data in the flight recorder containing data from flights of that competition day were evaluated by the organiser of the 31st FAI WGC 2010.

1.12 Wreckage and impact information

The accident area was delimited by the geographic coordinates: N 48°48'27'';
E 018°21'31''.

The accident area was a mown pasture with a moderate longitudinal uphill gradient, starting with a line of fruiters.





1.13 Medical and pathological information

Not applicable.

1.14 Fire

Not applicable.

1.15 Survival aspects

Search and rescue by SAR devices were not required.

1.16 Tests and research

Not applicable.

1.17 Organizational and management information

The 31st FAI WGC 2010 was organised in accordance with the FAI Sport Rules – General Part and Part 3, Amendment "A" to the Sport Rules, Part 3, and Local Rules of the 31st FAI WGC 2010.

At daily pre-flight briefings the pilots of competitive aircraft were instructed on:

- the need to comply with the safety rules;
- flight rules of the track and rules for circling in updraft;
- increased risk of potential collision during competitive flights;
- the need to comply with the rules on the search for other aircraft in their proximity and on early selection of areas for ground landing.

1.18 Additional information

Not applicable.

1.19 Useful or effective investigation techniques

Standard investigation methods were used.

2. ANALYSIS

2.1. Flight history

Above the municipality of Kšinná the pilot reached a flight altitude that was not sufficient for him to continue the flight on the planned competitive track and decided to make a safety ground landing.

The pilot landed with brake flaps out on the ground with longitudinal uphill gradient. The levelling-off and subsequent landing were probably made at a low speed with first contact by tail skid and then by the wheel of main landing gear. The aircraft stopped 70 m from the point of its first contact with the ground.

2.2. Crew

According to submitted documentation the pilot of aircraft **B1-PW-5 "WI"** had valid qualifications for flights with aircraft classified to this category.

The pilot had sufficient flying experiences for performance of competitive flights.

At the time of air accident the pilot was not under influence of alcohol, narcotics or common drugs likely to decrease his attention during flight.

2.7 Meteorological conditions

The critical flight of aircraft B1-PW-5 "WI" was conducted in an environment that from the meteorological view can be characterised as stable weather– with occasional rain showers, weakening thermal currents and excellent visibility without meteorological phenomena likely to unfavourably affect the flight of the respective aircraft.

On this basis it can be concluded that meteorological conditions at the time of air accident could not have participated in its occurrence.

3. CONCLUSIONS / Cause of air accident

The pilot did not master the technique of safety landing on a ground with longitudinal uphill gradient at a low flight speed with flaps fully out.

4. SAFETY RECOMMENDATIONS

Following the investigation of causes of the air accident of aircraft

type: **B1-PW-5**

registration No: **SP-3662**

date of accident: **16.07.2010**

We recommend the implementation of the following measures:

To implement an analysis of the critical air accident through the designated organisation of SNA (Slovak National Aeroclub) with participation of the flight personnel.

Bratislava, 8 November 2010